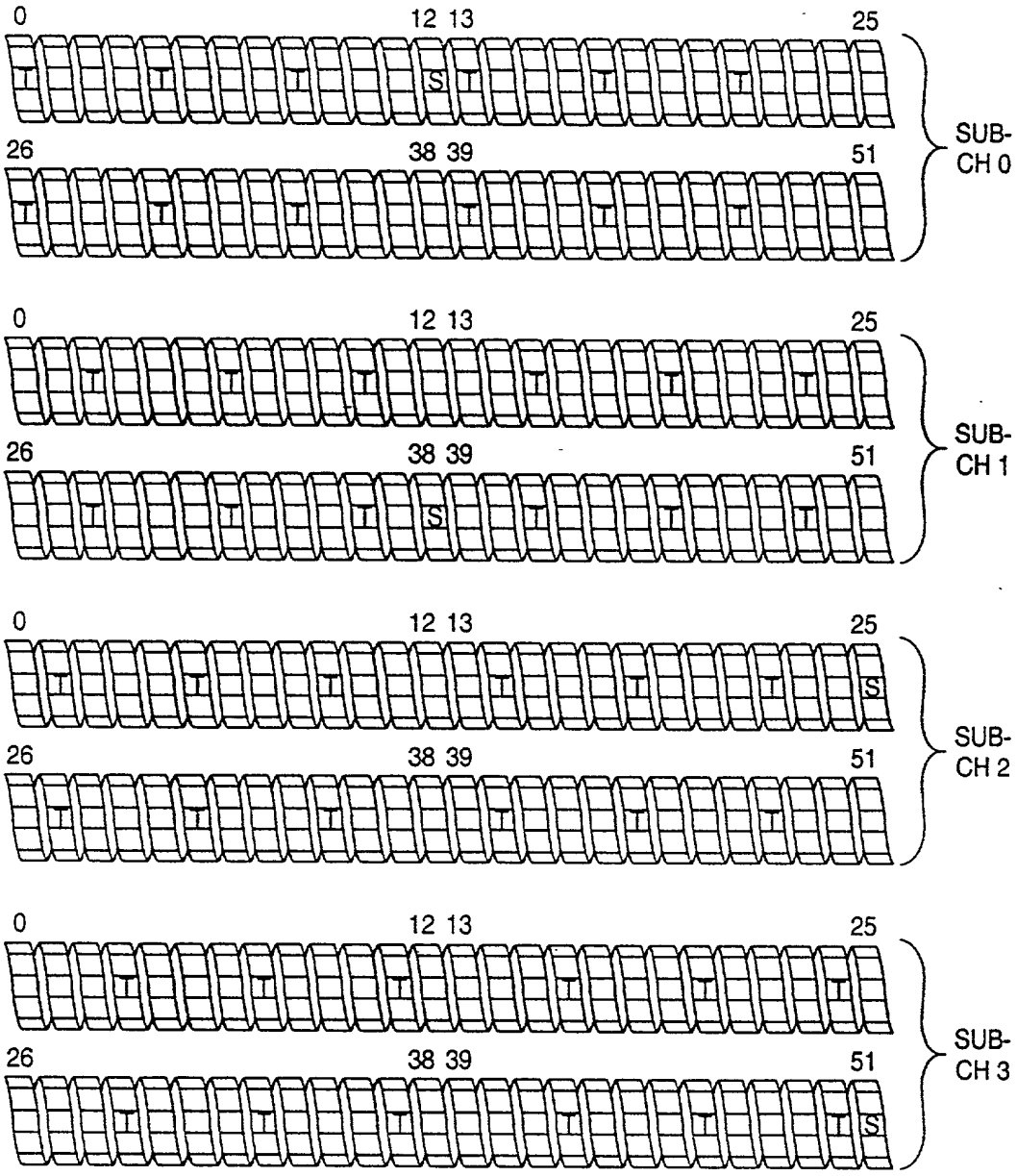

Fig. 1
PRIOR ART

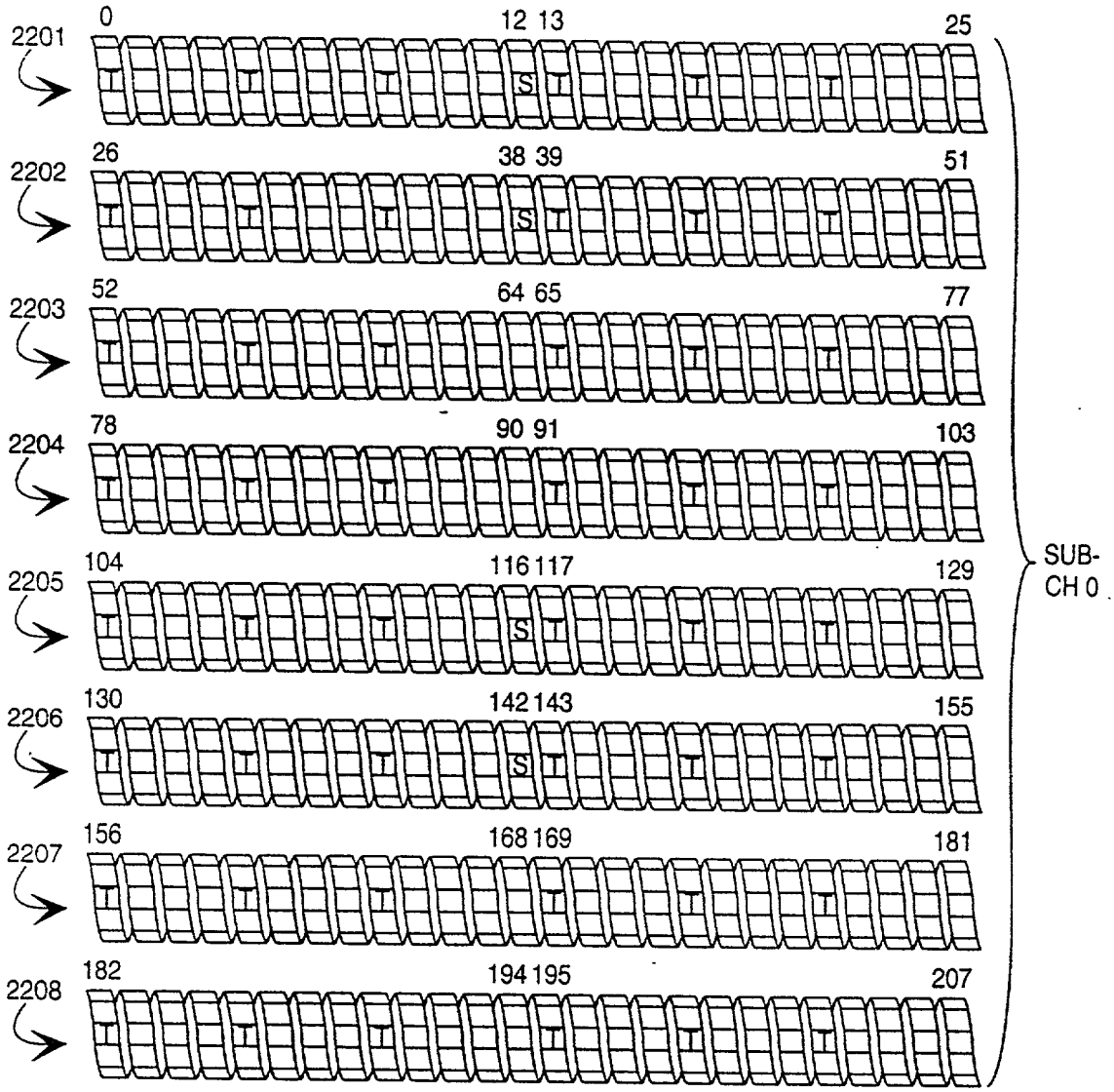
2201
0
12 13
25
2202
26
38 39
51
2203
52
64 65
77
2204
78
90 91
103
2205
104
116 117
129
2206
130
142 143
155
2207
156
168 169
181
2208
182
194 195
207
SUB-
CH 0

Fig. 2a

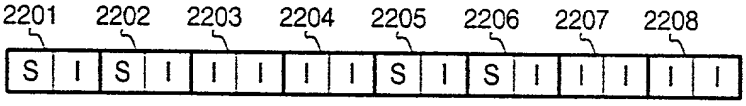
2201
2202
2203
2204
2205
2206
2207
2208
S I S I I I I I S I S I I I I I

Fig. 2b

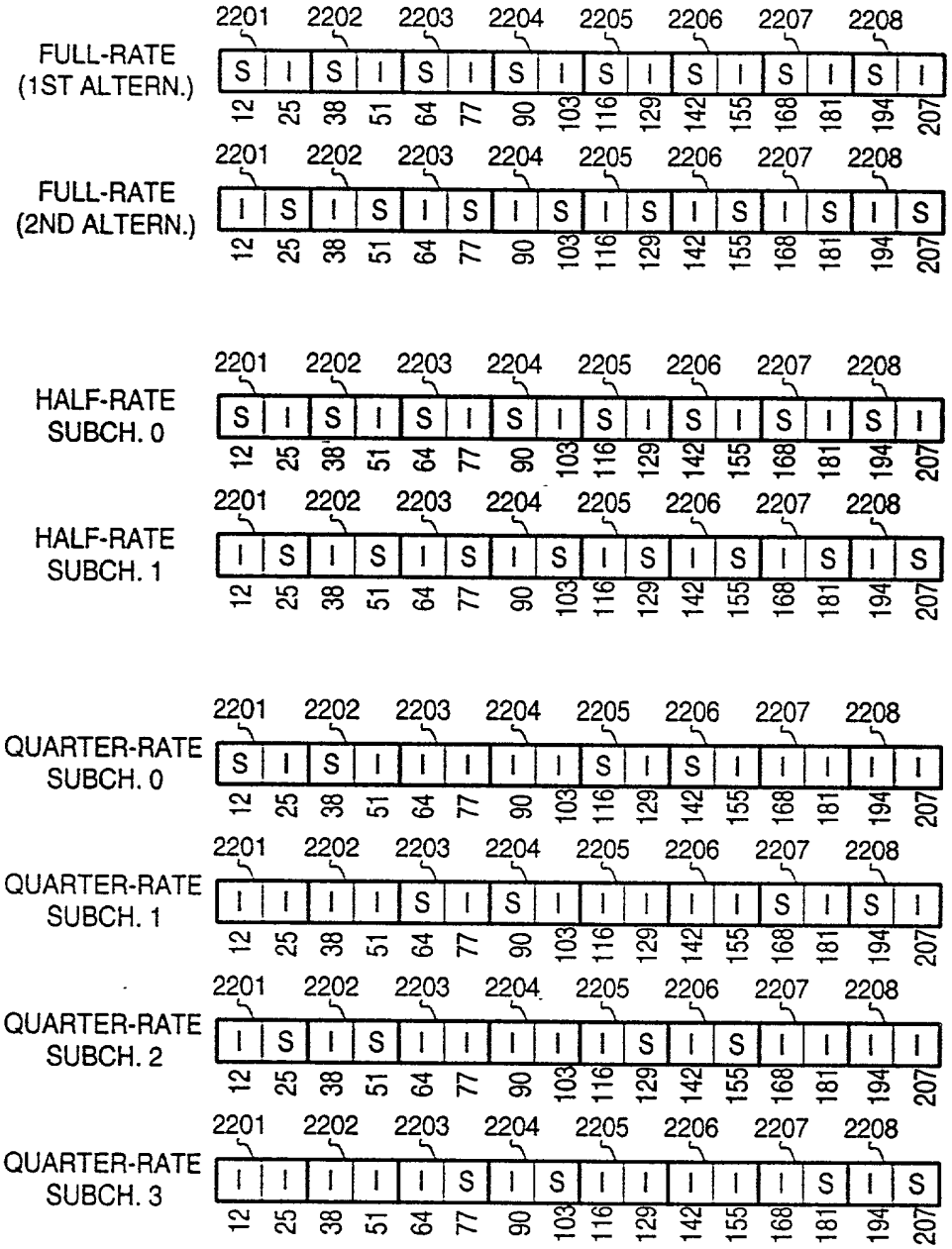
2201 2202 2203 2204 2205 2206 2207 2208
FULL-RATE (1ST ALTERN.)
FULL-RATE (2ND ALTERN.)
HALF-RATE SUBCH. 0
HALF-RATE SUBCH. 1
QUARTER-RATE SUBCH. 0
QUARTER-RATE SUBCH. 1
QUARTER-RATE SUBCH. 2
QUARTER-RATE SUBCH. 3
12 25 38 51 64 77 90 103 116 129 142 155 168 181 194 207

Fig. 3a

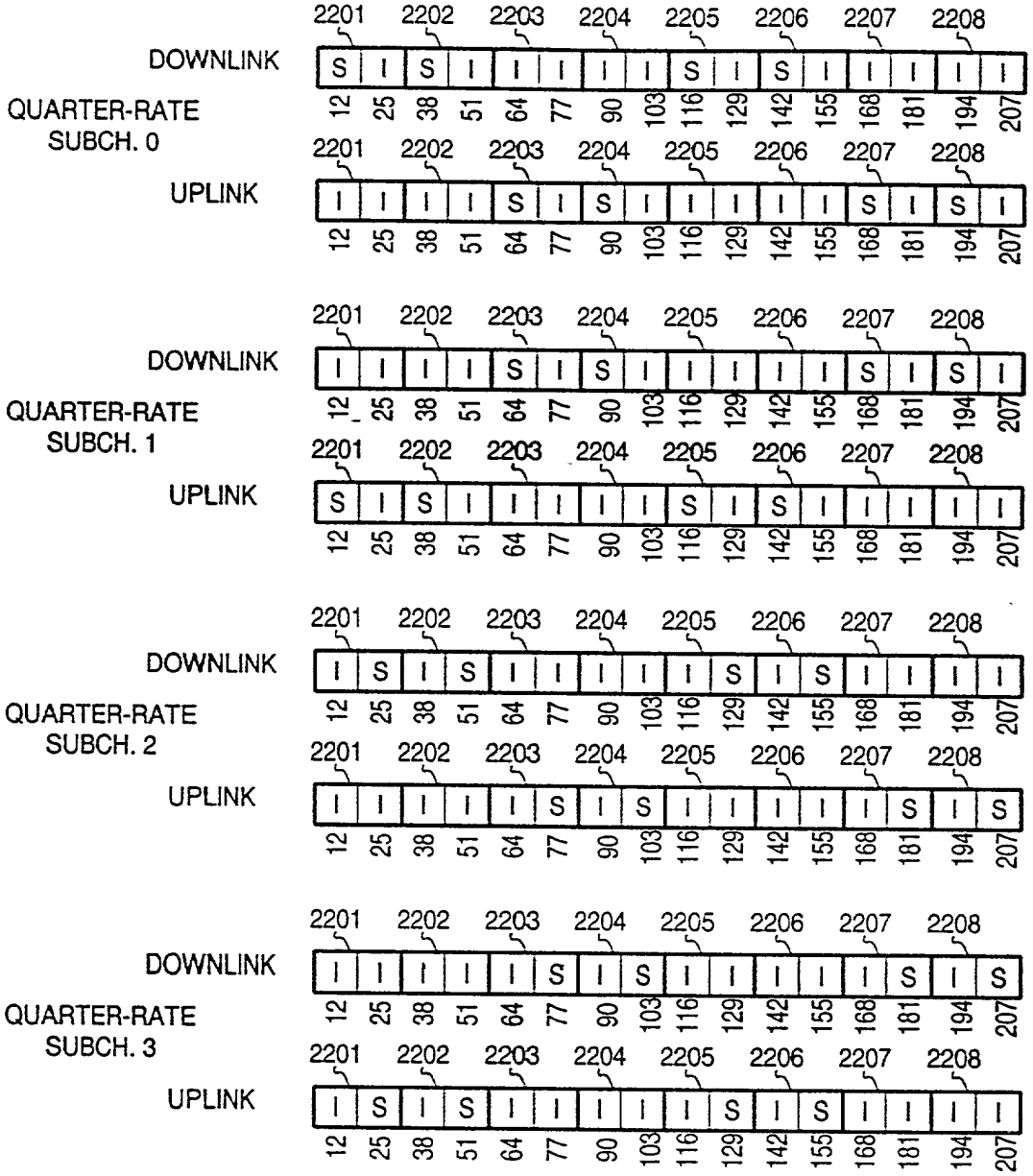
2201
2202
2203
2204
2205
2206
2207
2208
DOWNLINK
QUARTER-RATE SUBCH. 0
UPLINK
DOWNLINK
QUARTER-RATE SUBCH. 1
UPLINK
DOWNLINK
QUARTER-RATE SUBCH. 2
UPLINK
DOWNLINK
QUARTER-RATE SUBCH. 3
UPLINK
12
25
38
51
64
77
90
103
116
129
142
155
168
181
194
207

Fig. 3b

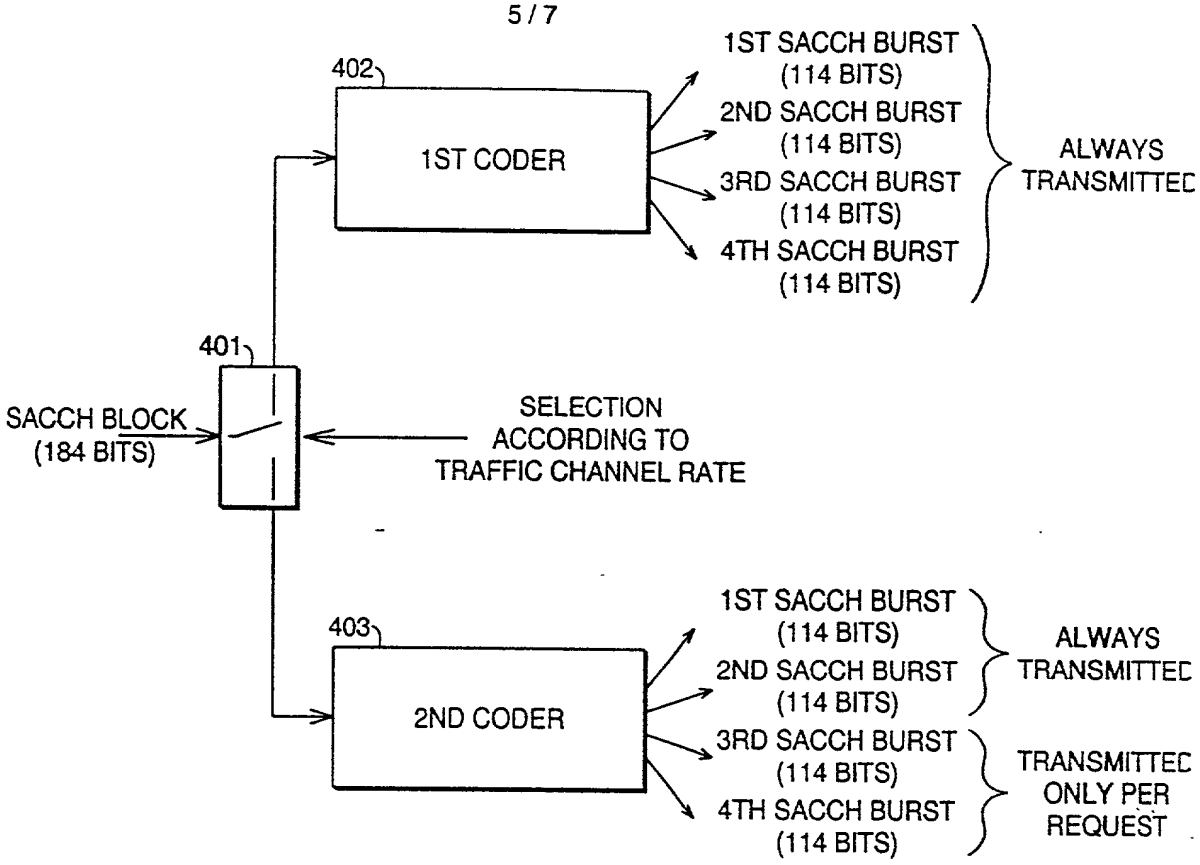
402
1ST CODER
1ST SACCH BURST (114 BITS)
2ND SACCH BURST (114 BITS)
3RD SACCH BURST (114 BITS)
4TH SACCH BURST (114 BITS)
ALWAYS TRANSMITTED
401
SACCH BLOCK (184 BITS)
SELECTION ACCORDING TO TRAFFIC CHANNEL RATE
403
2ND CODER
1ST SACCH BURST (114 BITS)
2ND SACCH BURST (114 BITS)
ALWAYS TRANSMITTED
3RD SACCH BURST (114 BITS)
4TH SACCH BURST (114 BITS)
TRANSMITTED ONLY PER REQUEST

Fig. 4

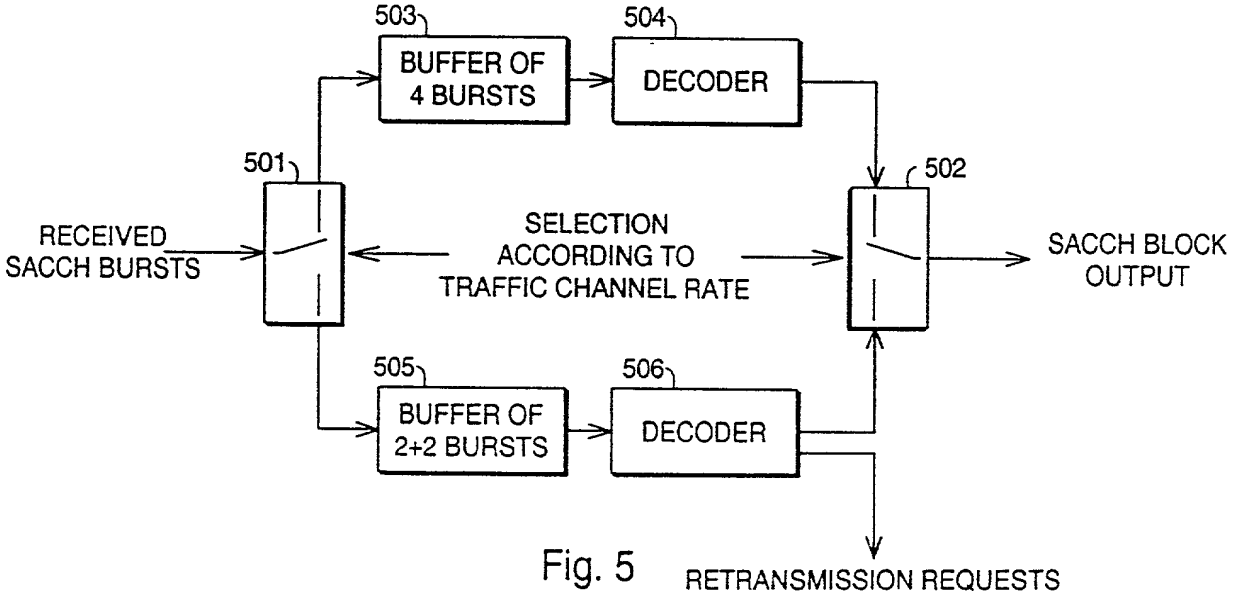
503
BUFFER OF 4 BURSTS
504
DECODER
501
502
RECEIVED SACCH BURSTS
SELECTION ACCORDING TO TRAFFIC CHANNEL RATE
SACCH BLOCK OUTPUT
505
BUFFER OF 2+2 BURSTS
506
DECODER
RETRANSMISSION REQUESTS

Fig. 5

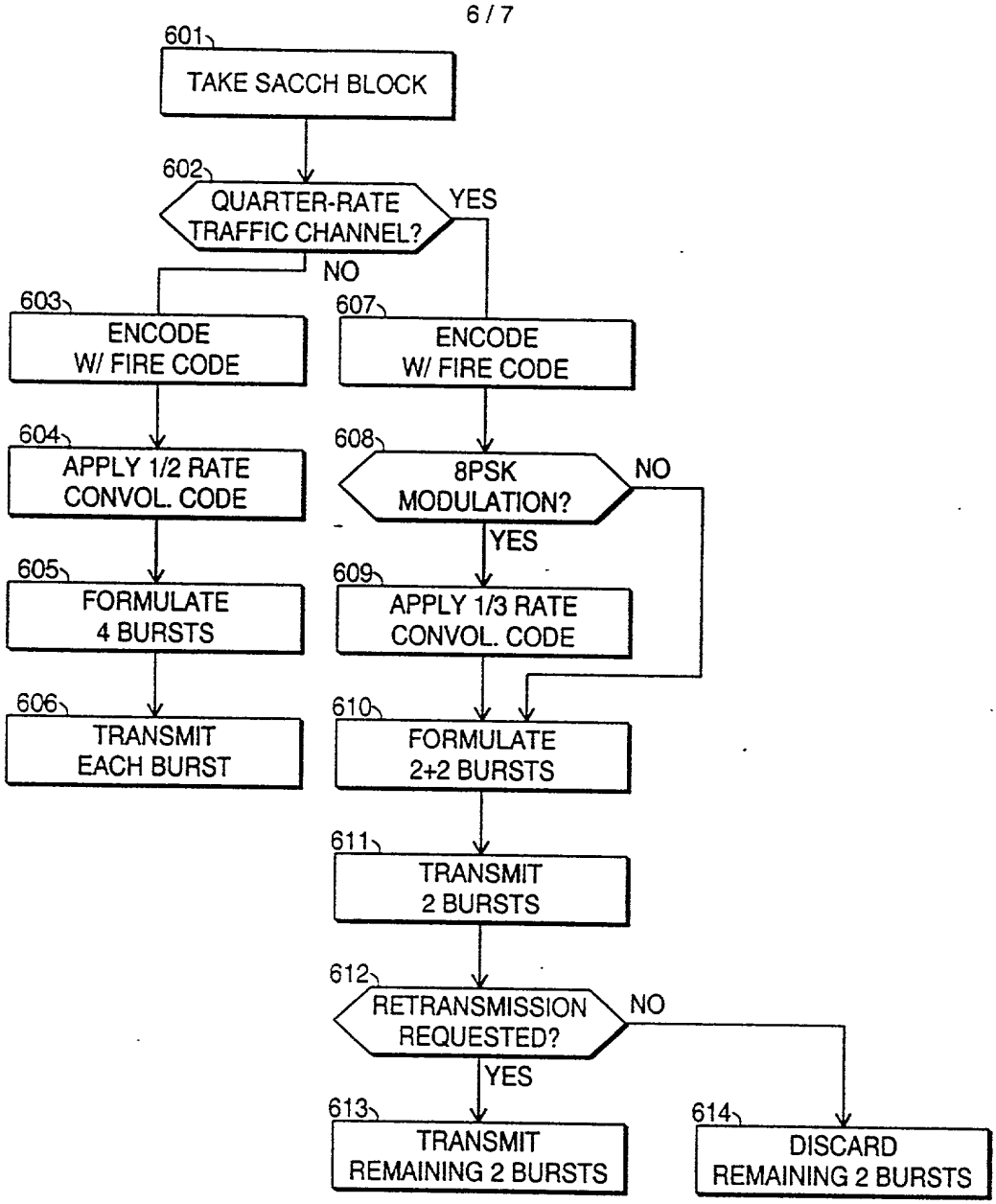
601
TAKE SACCH BLOCK
602
QUARTER-RATE TRAFFIC CHANNEL?
YES
NO
603
ENCODE W/ FIRE CODE
604
APPLY 1/2 RATE CONVOL. CODE
605
FORMULATE 4 BURSTS
606
TRANSMIT EACH BURST
607
ENCODE W/ FIRE CODE
608
8PSK MODULATION?
NO
YES
609
APPLY 1/3 RATE CONVOL. CODE
610
FORMULATE 2+2 BURSTS
611
TRANSMIT 2 BURSTS
612
RETRANSMISSION REQUESTED?
NO
YES
613
TRANSMIT REMAINING 2 BURSTS
614
DISCARD REMAINING 2 BURSTS

Fig. 6

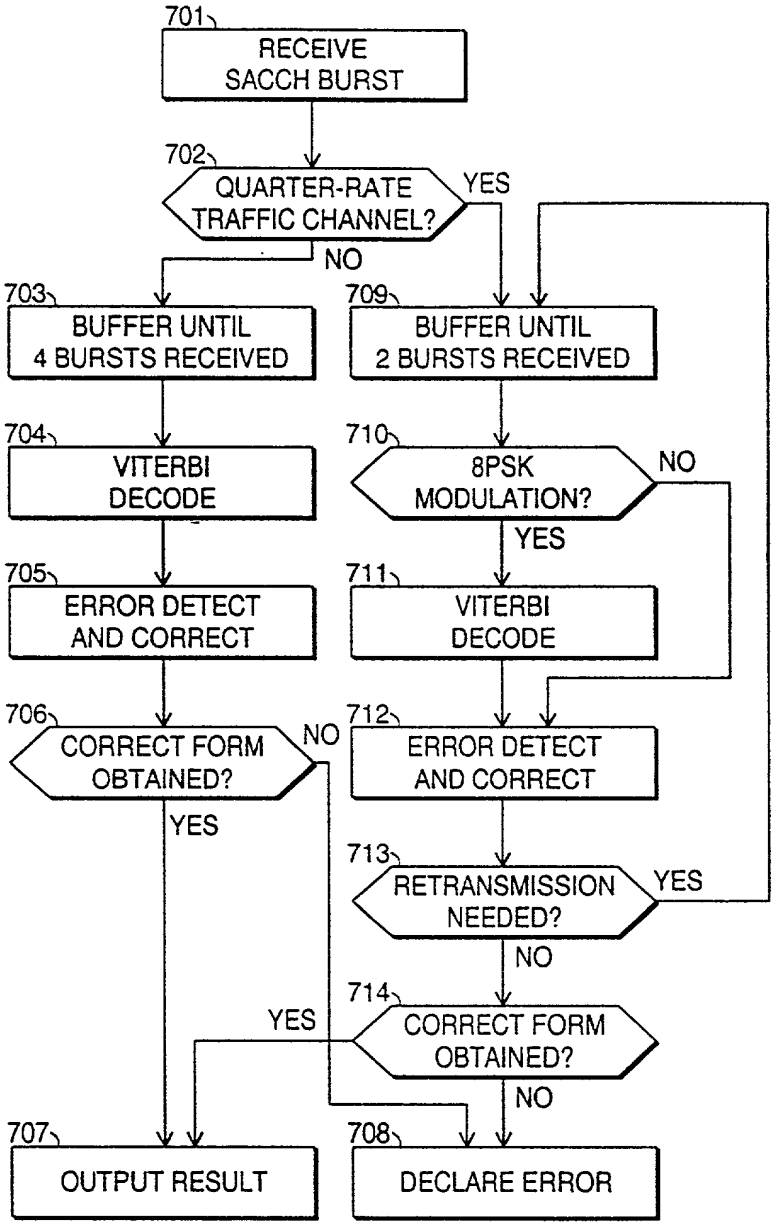
701
RECEIVE SACCH BURST
702
QUARTER-RATE TRAFFIC CHANNEL?
YES
NO
703
BUFFER UNTIL 4 BURSTS RECEIVED
709
BUFFER UNTIL 2 BURSTS RECEIVED
704
VITERBI DECODE
710
8PSK MODULATION?
NO
YES
705
ERROR DETECT AND CORRECT
711
VITERBI DECODE
706
CORRECT FORM OBTAINED?
NO
712
ERROR DETECT AND CORRECT
YES
713
RETRANSMISSION NEEDED?
YES
NO
714
CORRECT FORM OBTAINED?
YES
NO
707
OUTPUT RESULT
708
DECLARE ERROR

Fig. 7